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#2936

J. Lamb / 1034A  
Requestor Document Center (is requested to provide the following document)

Date of request ~~6/28/96~~ 6/28/96 Expected receipt of document ~~6/28/96~~ 7/14/96

Document number none Date of document 1960-1961

Title and author (if document is unnumbered)

Beta Activity in the Clinch River 1960-1961

(This section to be completed by Document Center)

Date request received 7/1/96

Date submitted to ADC 7/11/96

Date submitted to HSA Coordinator 7/1/96

(This section to be completed by HSA Coordinator)

Date submitted to CICO 7/11/96

Date received from CICO 7/16/96

Date submitted to ChemRisk/Shonka and DOE 8/1/96

(This section to be completed by ChemRisk/Shonka Research Associates, Inc.)

Date document received

Signature

# 2936

BETA ACTIVITY IN THE  
CLINCH RIVER 1960-1961  
(WATER AND MUD)

This document has been approved for release  
to the public by: *J. W. Selby, for*

*AS Quinn / sst* 7/16/96  
Technical Information Officer Date  
Oak Ridge K-25 Site

Union Carbide Nuclear Company, Oak Ridge  
Gaseous Diffusion Plant, Operating Contractor  
for the U.S. Atomic Energy Commission.



# INTERNAL CORRESPONDENCE

UNION CARBIDE NUCLEAR COMPANY

POST OFFICE BOX P, OAK RIDGE, TENNESSEE

To (Name) Mr. A. F. Becher  
Company  
Location

Date June 9, 1961

Originating Dept. Utilities Operations

Answering letter date

Copy to Mr. J. A. Parsons  
File

Subject Beta Activity in  
the Clinch River

Following are results of monitor readings of finished water at K-1515 during the five-week period beginning May 1 and ending June 4, 1961. The beta activity is reported as disintegrations per minute per 100 milliliters.

May 1	33
2	38
3	62
4	42
5	33
6	33
7	24
8	24
9	38
10	113
11	52
12	82
13	65
14	150

May 15	98
16	52
17	378
18	265
19	220
20	168
21	120
22	270
23	92
24	92
25	220
26	242
27	13
28	18

May 29	18
30	22
31	18
June 1	25
2	18
3	25
4	25

1961 JUN 12 PM 1:28

Safety and Health  
Physics

W. H. Taylor  
Utilities Operations Department



INTERNAL CORRESPONDENCE

UNION CARBIDE NUCLEAR COMPANY •

POST OFFICE BOX P. OAK RIDGE, TENNESSEE

To (Name) Dr. H. F. Henry  
Company  
Location K-1001

Date May 3, 1961

Originating Dept. Utilities Operations


Answering letter date

Copy to Mr. A. F. Becher  
Mr. J. A. Parsons  
File

Subject Beta Activity in the  
Clinch River

Following are results of monitor readings of finished water at K-1515 during the week ending April 30, 1961. The beta activity is reported as disintegrations per minute per 100 milliliters.

April 24	92
25	98
26	28
27	70
28	30
29	18
30	42

  
W. H. Taylor  
Utilities Operations Department

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CARBIDE

INTERNAL CORRESPONDENCE

UNION CARBIDE NUCLEAR COMPANY

POST OFFICE BOX P. OAK RIDGE, TENNESSEE

To (Name) Dr. R. P. Henry  
Company K-1101  
Location  
Date April 25, 1961  
Originating Dept. Utilities Operations  
Answering letter date  
Copy to Mr. A. F. Becher  
Mr. J. A. Parsons  
File  
Subject Beta Activity in  
the Clinch River

Recent laboratory results on weekly raw and finished water samples furnished them are as follows.

Week Ending	Raw Water Total Beta d/m/100ml	Finished Water Total Beta c/m/100 ml
April 9	302	331
April 16	441	515

The new water monitor tube was received and installed on April 14, 1961. Following are results of monitor readings of finished water at K-1515 during the period April 14 through April 23, 1961. The beta activity is reported as disintegrations per minute per 100 milliliters.

April 14	163
15	152 - 29*
16	138 -
17	132
18	108
19	205
20	158
21	158
22	103
23	82

514

1961 APR 27 AM 8:27

Safety and Health  
Physics

*W. H. Taylor*  
W. H. Taylor  
Utilities Operations Department

GP



INTERNAL CORRESPONDENCE

1961 APR 10 AM 10:19

UNION CARBIDE NUCLEAR COMPANY

POST OFFICE BOX P. OAK RIDGE, TENNESSEE

To (Name) Dr. H. F. Henry  
Company K-1001  
Location  
  
Date April 6, 1961  
Originating Dept. Utilities Operations  
Answering letter date  
  
Copy to Mr. A. F. Becher  
Mr. J. A. Parsons  
File  
Subject Beta Activity in  
the Clinch River

We are continuing operation of the water monitor with an old tube which reflects changes but is biased low. We are expecting to receive a new tube soon. The recent laboratory results on weekly composite samples furnished them are as follows.

<u>Week Ending</u>	<u>Raw Water Total Beta d/m/100 ml</u>	<u>Finished Water Total Beta d/m/100 ml</u>
March 26	149	158
April 2	331	385

W. C. Hartman  
W C. Hartman  
Utilities Operations Department

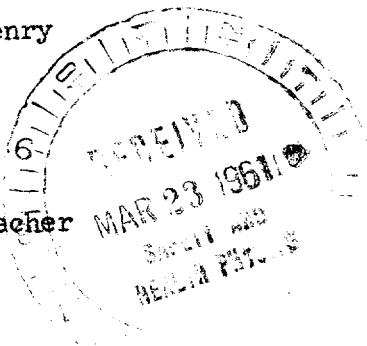
EP

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CARBIDE

INTERNAL CORRESPONDENCE

UNION CARBIDE NUCLEAR COMPANY • POST OFFICE BOX P, OAK RIDGE, TENNESSEE

To (Name) Dr. H. F. Henry  
Company K-1001  
Location  
Date March 22, 1961  
Originating Dept.  
Answering letter date  
Copy to Mr. A. F. Becher  
File  
Subject Beta Activity in  
the Clinch River



The more recent laboratory results indicate that the water monitor tube at K-1515 is not giving very reliable readings. A new spare tube was installed on February 20 and was found to be faulty. This week another new tube arrived and was crushed in shipment. We are continuing to operate the water monitor with an old tube, but it is obviously biased low. The recent laboratory results on weekly composite samples furnished them are as follows.

<u>Week Ending</u>	<u>Raw Water Total Beta d/m/100 ml</u>	<u>Finished Water Total Beta d/m/100 ml</u>
February 19	609	699
February 26	877	1028
March 5	97	134
March 12	136	111
March 19	121	102

*W. C. Hartman*

W. C. Hartman  
Utilities Operations Department

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INTERNAL CORRESPONDENCE

UNION CARBIDE NUCLEAR COMPANY •

POST OFFICE BOX P, OAK RIDGE, TENNESSEE

To (Name) Dr. H. F. Henry  
Company  
Location K-1001

Date February 14, 1961  
Originating Dept. Utilities Operations

Answering letter date

Copy to Mr. A. F. Becher  
File

Subject Beta Activity in the  
Clinch River

Following are results of monitor readings of finished water at K-1515 during the week ending February 12, 1961. The beta activity is reported as disintegrations per minute per 100 milliliters.

February	6	92
	7	151
	8	466
	9	620
	10	570
	11	455
	12	394

The average beta concentration for the last 91 days is 271 d/m/100 ml.

*W. C. Hartman*

W. C. Hartman  
Utilities Operations Department

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INTERNAL CORRESPONDENCE

UNION CARBIDE NUCLEAR COMPANY

POST OFFICE BOX P. OAK RIDGE, TENNESSEE

To (Name) Dr. H. F. Henry Date February 8, 1961  
Company K-1001 Originating Dept. Utilities Operations  
Location  
Copy to Mr. A. F. Becher Subject Beta Activity in the  
File Clinch River

FEB 10 1961

Following are results of monitor readings of finished water at K-1515 during the week ending February 5, 1961. The beta activity is reported as disintegrations per minute per 100 milliliters.

January 30	198
303	237
February 1	269
2	113
3	82
4	108
5	138

The average beta concentration for the last 91 days is 283 d/m/100 ml.

W. C. Hartman  
W. C. Hartman  
Utilities Operations Department

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SIDE**

**INTERNAL CORRESPONDENCE**

**UNION CARBIDE NUCLEAR COMPANY**

POST OFFICE BOX P. OAK RIDGE. TENNESSEE

To (Name)  
Company  
Location

Dr. H. F. Henry

K-1001

Date \_\_\_\_\_

February 1, 1961

Originating Dept.

## Utilities Operations

Answering letter date

Copy to

Mr. A. F. Becher  
File

### Subject

## Beta Activity in the Clinch River

Following are results of monitor readings of finished water at K-1515 during the three-week period ending January 29, 1961. The beta activity is reported as disintegrations per minute per 100 milliliters.

January	9	230	January	16	303
	10	47		17	305
	11	33		18	82
	12	21		19	60
	13	333		20	145
	14	43		21	127
	15	125		22	62

January	23	71
	24	42
	25	42
	26	72
	27	156
	28	198
	29	204

The average beta concentration for the last 91 days is 276 d/m/100 ml.

W. C. Hartman  
Utilities Operations Department

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INTERNAL CORRESPONDENCE

UNION CARBIDE NUCLEAR COMPANY • POST OFFICE BOX P. OAK RIDGE, TENNESSEE

To (Name)	Dr. H. F. Henry	Date	January 10, 1961
Company	K-1001	Originating Dept.	Utilities Operations
Location		Answering letter date	
Copy to	Mr. A. F. Becher File	Subject	Beta Activity in the Clinch River

Following are results of monitor readings of finished water at K-1515 during the week ending January 8, 1961. The beta activity is reported as disintegrations per minute per 100 milliliters.

January 2	669
3	377
4	330
5	270
6	253
7	303
8	285

The average beta concentration for the last 91 days is 294 d/m/100 ml.

*W. C. Hartman*

W. C. Hartman  
Utilities Operations Department

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INTERNAL CORRESPONDENCE

UNION CARBIDE NUCLEAR COMPANY

POST OFFICE BOX P. OAK RIDGE, TENNESSEE

To (Name) Dr. H. F. Henry Date January 4, 1961  
Company K-1001 Originating Dept. Utilities Operations  
Location  
Answering letter date  
Copy to Mr. A. F. Becher Subject Beta Activity in the  
File Clinch River

Following are results of monitor readings of finished water at K-1515 during the two-week period beginning December 19 and ending January 1, 1961. The beta activity is reported as disintegrations per minute per 100 milliliters.

December 19	21
20	21
21	57
22	82
23	82
24	82
25	82
December 26	82
27	82
28	82
29	82
30	245
31	197
January 1	255

The average beta concentration for the last 91 days is 279 d/m/100 ml.

W. C. Hartman  
W. C. Hartman  
Utilities Operations Department

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CARBIDE**

**INTERNAL CORRESPONDENCE**

**UNION CARBIDE NUCLEAR COMPANY** • POST OFFICE BOX P, OAK RIDGE, TENNESSEE

To (Name)	Dr. H. F. Henry	Date	December 20, 1960
Company	K-1001	Originating Dept.	Utilities Operations
Location		Answering letter date	
Copy to	Mr. A. F. Becher File	Subject	Beta Activity in the Clinch River

Following are results of monitor readings of finished water at K-1515 during the four-week period beginning November 21 and ending December 18, 1960. The beta activity is reported as disintegrations per minute per 100 milliliters.

November 21	337	December 5	53
22	515	6	53
23	435	7	38
24	480	8	25
25	540	9	25
26	560	10	21
27	367	11	21
November 28	358	December 12	246
29	620	13	600
30	320	14	73
December 1	460	15	52
2	53	16	52
3	53	17	128
4	53	18	25

W. C. Hartman  
Utilities Operations Department

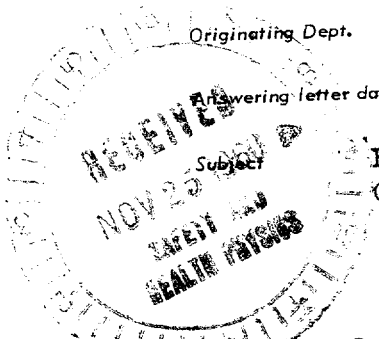


INTERNAL CORRESPONDENCE

UNION CARBIDE NUCLEAR COMPANY

POST OFFICE BOX P, OAK RIDGE, TENNESSEE

To (Name) Dr. H. F. Henry  
Company  
Location K-1001  
Date November 23, 1960  
Originating Dept. Utilities Operations  
Answering letter date  
Subject Beta Activity in the Clinch River  
Copy to Mr. A. F. Becher  
File



Following are results of monitor readings of finished water at K-1515 during the week ending November 20, 1960. The beta activity is reported as disintegrations per minute per 100 milliliters.

November	14	1,958
	15	2,066
	16	1,669
	17	710
	18	458
	19	416
	20	537

The average beta concentration for the last 91 days is 201 d/m/100 ml.

*W. C. Hartman*  
W. C. Hartman  
Utilities Operations Department

SP



INTERNAL CORRESPONDENCE

UNION CARBIDE NUCLEAR COMPANY • POST OFFICE BOX P. OAK RIDGE, TENNESSEE

To (Name) Dr. H. F. Henry  
Company K-1001  
Location  
Date November 15, 1960  
Originating Dept. Utilities Operations  
Answering letter date  
Copy to Mr. A. F. Becher  
File Subject Beta Activity in the Clinch River

Following are results of monitor readings of finished water at K-1515 during the six-week period beginning October 3 and ending November 13, 1960. The beta activity is reported as disintegrations per minute per 100 milliliters.

October 3	34	October 24	103
4	52	25	92
5	237	26	62
6	175	27	33
7	179	28	33
8	206	29	33
9	173	30	43
October 10	1,979	October 31	62
11	615	November 1	72
12	330	2	52
13	72	3	56
14	52	4	56
15	52	5	62
16	43	6	113
October 17	18	November 7	152
18	18	8	200
19	18	9	356
20	24	10	712
21	113	11	835
22	220	12	835
23	140	13	765

The average beta concentration for the last 91 days is 117 d/m/100 ml.

*W. C. Hartman*  
W. C. Hartman  
Utilities Operations Department

AL ✓



INTERNAL CORRESPONDENCE

UNION CARBIDE NUCLEAR COMPANY

POST OFFICE BOX P. OAK RIDGE, TENNESSEE

To (Name) Dr. H. F. Henry  
 Company K-1001  
 Location  
 Date October 4, 1960  
 Originating Dept. Utilities Operations  
 Answering letter date  
 Copy to Mr. A. P. Becher  
 File Subject Beta Activity in the Clinch River

Following are results of monitor readings of finished water at K-1515 during the two-week period ending October 2, 1960. The beta activity is reported as disintegrations per minute per 100 milliliters.

September 19	81
20	185
21	120
22	35
23	24
24	20
25	20
September 26	10
27	10
28	10
29	0
30	0
October 1	0
2	24

The average beta concentration for the last 91 days is 21 d/m/100 ml.

*W. C. Hartman*  
 W. C. Hartman  
 Utilities Operations Department

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INTERNAL CORRESPONDENCE

UNION CARBIDE NUCLEAR COMPANY

POST OFFICE BOX P. OAK RIDGE, TENNESSEE

To (Name) Dr. H. F. Henry  
Company K-1001  
Location  
Date September 20, 1960  
Originating Dept. Utilities Operations  
Answering letter date  
Copy to Mr. A. F. Becher  
File Subject Beta Activity in the  
Clinch River

Following are results of monitor readings of finished water at K-1515 during the week ending September 18, 1960. The beta activity is reported as disintegrations per minute per 100 milliliters.

September 12	18
13	37
14	86
15	20
16	0
17	5
18	18

The average beta concentration for the last 91 days is 27 d/m/100 ml.

The 91-day average beta concentration for week ending September 11, 1960, is corrected to read 26 d/m/100 ml instead of 12 d/m/100 ml as previously reported.

W. C. Hartman  
W. C. Hartman  
Utilities Operations Department

EP



INTERNAL CORRESPONDENCE

UNION CARBIDE NUCLEAR COMPANY


POST OFFICE BOX P. OAK RIDGE, TENNESSEE

To (Name) Dr. H. F. Henry  
Company K-1001  
Location  
Date September 12, 1960  
Originating Dept. Utilities Operations  
Answering letter date  
Copy to Mr. A. F. Becher  
File  
Subject Beta Activity in the  
Clinch River

Following are results of monitor readings of finished water at K-1515 during the week ending September 11, 1960. The beta activity is reported as disintegrations per minute per 100 milliliters.

September	5	0
	6	0
	7	0
	8	5
	9	0
	10	5
	11	5

The average beta concentration for the last 91 days is 12 d/m/100 ml.

  
V. C. Hartman  
Utilities Operations Department

EP

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INTERNAL CORRESPONDENCE

UNION CARBIDE NUCLEAR COMPANY

POST OFFICE BOX P. OAK RIDGE, TENNESSEE

To (Name) Dr. H. F. Henry  
Company K-1001  
Location

Date September 8, 1960  
Originating Dept. Utilities Operations

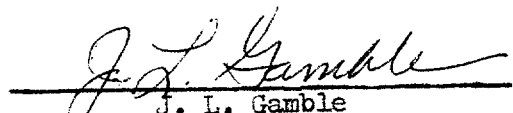
Answering letter date

Copy to Mr. A. F. Becher  
File

Subject Beta Activity in the  
Clinch River

Following are results of monitor readings of finished water at K-1515 during the week ending September 4, 1960. The beta activity is reported as disintegrations per minute per 100 milliliters

August	29	18
	30	18
	31	18
September	1	18
	2	0
	3	0
	4	0

  
J. L. Gamble  
Utilities Operations Department

EP



INTERNAL CORRESPONDENCE

UNION CARBIDE NUCLEAR COMPANY

POST OFFICE BOX P. OAK RIDGE, TENNESSEE

To (Name) Dr. H. F. Henry  
Company K-1001  
Location  
Date August 29, 1960  
Originating Dept. Utilities Operations  
Answering letter date  
Copy to Mr. A. F. Becher  
File Subject Beta Activity in the  
Clinch River

Following are results of monitor readings of finished water at K-1515 during the week ending August 28, 1960. The beta activity is reported as disintegrations per minute per 100 milliliters.

August 22	14
23	0
24	55
25	42
26	37
27	30
28	20

The average beta concentration for the last 36 days is 29 d/m/100 ml.

W. C. Hartman  
W. C. Hartman  
Utilities Operations Department

SP

UNION  
CARBIDE

INTERNAL CORRESPONDENCE

*Handwritten notes:*  
Mr. E. S. ...  
Mr. W. J. ...

UNION CARBIDE NUCLEAR COMPANY

POST OFFICE BOX P. OAK RIDGE, TENNESSEE

To (Name) Dr. H. P. Henry  
Company K-1001  
Location  
Date August 23, 1960  
Originating Dept. Utilities Operations  
Answering letter date  
Copy to Mr. A. F. Becher  
File  
Subject Beta Activity in the Clinch River

Following are results of monitor readings of finished water at K-1515 during the two-week period ending August 21, 1960. The beta activity is reported as disintegrations per minute per 100 milliliters.

August	8	10
	9	11
	10	53
	11	58
	12	52
	13	42
	14	33
	15	33
	16	33
	17	33
	18	24
	19	18
	20	14
	21	0

The average beta concentration for the last 65 days is 29 d/m/100 ml.

*W. C. Hartman*  
W. C. Hartman  
Utilities Operations Department

SP



INTERNAL CORRESPONDENCE

UNION CARBIDE NUCLEAR COMPANY •

POST OFFICE BOX P, OAK RIDGE, TENNESSEE

To (Name) Dr. H. F. Henry  
Company  
Location K-1001

Date August 8, 1960  
Originating Dept. Utilities Operations

Answering letter date

Copy to Mr. A. F. Becher  
File

100 10000  
Subject

Beta Activity in the  
Clinch River

Following are results of monitor readings of finished water at K-1515 during the week ending August 7, 1960. The beta activity is reported as disintegrations per minute per 100 milliliters.

August 1	13
2	17
3	10
4	10
5	0
6	0
7	5

The average beta concentration for the last 65 days is 29 d/m/100 ml.

*W. C. Hartman*

W. C. Hartman  
Utilities Operations Department

EP

UNION  
CARBIDE

INTERNAL CORRESPONDENCE

UNION CARBIDE NUCLEAR COMPANY

POST OFFICE BOX P. OAKRIDGE, TENNESSEE

To (Name) Dr. H. F. Henry  
Company  
Location K-1001

Date August 2, 1960  
Originating Dept. Utilities Operations  
Answering letter date

Copy to Mr. A. F. Becher  
File

Subject Beta Activity in the  
Clinch River

Following are results of monitor readings of finished water at K-1515 during the week ending July 31, 1960. The beta activity is reported as disintegrations per minute per 100 milliliters.

July 25	43
26	78
27	10
28	13
29	7
30	12
31	11

The average beta concentration for the last 58 days is 31 d/m/100 ml.

W. C. Hartman  
W. C. Hartman  
Utilities Operations Department

BP



INTERNAL CORRESPONDENCE

UNION CARBIDE NUCLEAR COMPANY

POST OFFICE BOX P. OAK RIDGE, TENNESSEE

To (Name) Dr. H. F. Henry  
Company  
Location K-1001

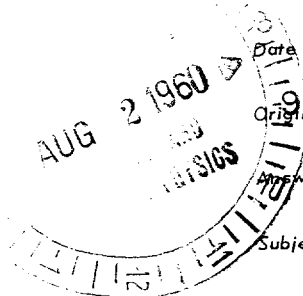
Date July 25, 1960

Originating Dept. Utilities Operations

Copy to Mr. A. F. Becher  
File

Answering letter date

Subject Beta Activity in the  
Clinch River



Following are results of monitor readings of finished water at K-1515 during the week ending July 24, 1960. The beta activity is reported as disintegrations per minute per 100 milliliters.

July 18	8
19	7
20	12
21	8
22	0
23	0
24	0

The average beta concentration for the last 51 days is 32 d/m/100 ml.

*W. C. Hartman*

W. C. Hartman  
Utilities Operations Department

SP



INTERNAL CORRESPONDENCE

UNION CARBIDE NUCLEAR COMPANY

POST OFFICE BOX P, OAK RIDGE, TENNESSEE

To (Name) Dr. H. F. Henry  
Company  
Location K-1001

Date July 19, 1960  
Originating Dept. Utilities Operations

Answering letter date

Copy to Mr. A. F. Becher  
File

Subject Beta Activity in the  
Clinch River

Following are results of monitor readings of finished water at K-1515 during the week ending July 17, 1960. The beta activity is reported as disintegrations per minute per 100 milliliters.

July 11	75
12	52
13	0
14	14
15	6
16	8
17	11

The average beta concentration for the last 44 days is 36 d/m/100 ml.

*W. C. Hartman*

W. C. Hartman

Utilities Operations Department

GP

UNION  
CARBIDE

INTERNAL CORRESPONDENCE

UNION CARBIDE NUCLEAR COMPANY • POST OFFICE BOX P, OAK RIDGE, TENNESSEE

To (Name) Dr. H. F. Henry  
Company  
Location K-1001

Date July 12, 1960

Originating Dept. Utilities Operations

Answering letter date

Copy to Mr. A. F. Becher  
File

Subject Beta Activity in the  
Clinch River

Following are results of monitor readings of finished water at K-1515 during the week ending July 10, 1960. The beta activity is reported as disintegrations per minute per 100 milliliters.

July	4	12
	5	14
	6	18
	7	0
	8	0
	9	0
	10	0

The average beta concentration for the last 38 days is 40 d/m/100 ml.

*W. C. Hartman*  
W. C. Hartman  
Utilities Operations Department

SP



INTERNAL CORRESPONDENCE

*SR - (Env. Sup.)  
We must...*

UNION CARBIDE NUCLEAR COMPANY

POST OFFICE BOX P, OAK RIDGE, TENNESSEE

To (Name) Dr. H. F. Henry  
Company  
Location K-1001

Date July 7, 1960  
Originating Dept. Utilities Operations

Answering letter date

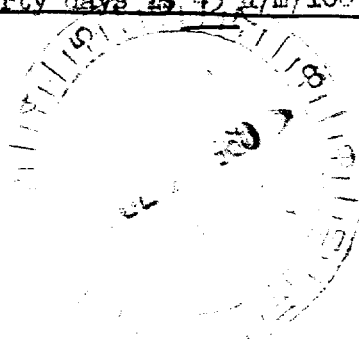
Copy to Mr. A. F. Becher  
File

Subject Beta Activity in the  
Clinch River

Following are results of monitor readings of finished water at K-1515 during the week ending July 3, 1960. The beta activity is reported as disintegrations per minute per 100 milliliters.

June 27	166
28	103
29	82
30	33
July 1	71
2	36
3	17

The average beta concentration for the last thirty days is 45 d/m/100 ml.

  
*W. C. Hartman*  
W. C. Hartman  
Utilities Operations Department



INTERNAL CORRESPONDENCE

UNION CARBIDE NUCLEAR COMPANY • POST OFFICE BOX P. OAK RIDGE, TENNESSEE

To (Name) Dr. H. F. Henry  
Company  
Location K-1001

Date June 28, 1960

Originating Dept. Utilities Operations

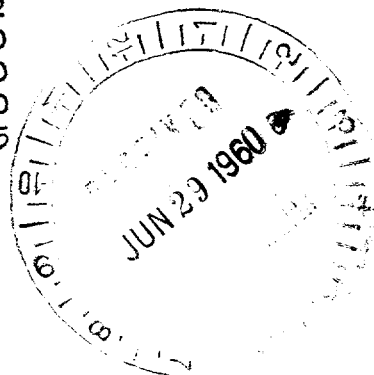
Answering letter date

Copy to Mr. A. F. Becher  
File

Subject Beta Activity in the  
Clinch River

Following are results of monitor readings of finished water at K-1515 during the week ending June 26, 1960. The beta activity is reported as disintegrations per minute per 100 milliliters.

June 20	95
21	132
22	12
23	10
24	30
25	130
26	165



W. C. Hartman  
W. C. Hartman  
Utilities Operations Department

UNION  
CARBIDE

INTERNAL CORRESPONDENCE

UNION CARBIDE NUCLEAR COMPANY • POST OFFICE BOX P. OAK RIDGE, TENNESSEE

To (Name) Dr. H. F. Henry  
Company  
Location K-1001

Date June 22, 1960

Originating Dept. Utilities Operations

Answering letter date

Copy to Mr. A. F. Becher  
File

Subject Beta Activity in the  
Clinch River

Following are results of monitor readings of finished water at K-1515 from June 9 to June 19, 1960, inclusive. The beta activity is reported as disintegrations per minute per 100 milliliters.

June 9	30
10	18
11	18
12	18
13	18
14	0
15	0
16	0
17	0
18	0
19	57

W. C. Hartman  
W. C. Hartman  
Utilities Operations Department

EP

UNION  
CARBIDE

## INTERNAL CORRESPONDENCE

UNION CARBIDE NUCLEAR COMPANY

POST OFFICE BOX P, OAK RIDGE, TENNESSEE

To (Name) Dr. H. F. Henry  
 Company  
 Location K-1001

Date June 9, 1960  
 Originating Dept. Utilities Operations

Answering letter date

Copy to Mr. A. F. Becher  
 File

Subject Beta Activity in the  
 Clinch River

Following are results of monitor readings of raw water at K-1515 from April 27 to June 8, 1960, inclusive. The beta activity is reported as disintegrations per minute per 100 milliliters.

April 27	367
April 28	500
April 29	700
April 30	420
May 1	640
May 2	452
May 3	1,701
May 4	582
May 5	600
May 6	250
May 7	190
May 8	137
May 9	113
May 10	120
May 11	115
May 12	40
May 13	103
May 14	152
May 15	83
May 16	260
May 17	595
May 18	-

May 19	530
May 20	151
May 21	177
May 22	168
May 23	189
May 24	116
May 25	133
May 26	113
May 27	61
May 28	68
May 29	65
May 30	92
May 31	130

June 1	37
June 2	60
* June 3	70
June 4	47
June 5	38
June 6	35
June 7	25
June 8	22

Raw

$$\frac{8156}{30} = 271.9$$

Finished

\*On June 3 the monitor was switched from raw to finished water to eliminate the background build-up that was being experienced from the turbidity of the raw water.

*W. C. Hartman*  
 W. C. Hartman  
 Utilities Operations Department

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CARBIDE

INTERNAL CORRESPONDENCE

UNION CARBIDE NUCLEAR COMPANY •

POST OFFICE BOX P. OAK RIDGE, TENNESSEE

To (Name) Dr. H. F. Henry  
Company  
Location K-1001

Date April 8, 1960

Originating Dept. Utilities Operations

Answering letter date

Copy to Mr. A. F. Becher  
File

Subject Beta Activity in the  
Clinch River

Following are results of monitor readings of raw water at K-1515 during the period March 23 through March 27, 1960. The beta activity is reported as disintegrations per minute per 100 milliliters. Also reported is the accumulated 13-week average total beta activity.

		<u>13-Week Average</u>
March 23	2,619	1,200
24	2,562	1,225
25	3,618	1,262
26	4,320	1,307
27	3,726	1,345

Below are corrected monitor readings for March 14 through March 22, 1960.

March 14	2,365	996
15	2,719	1,017
16	4,579	1,064
17	3,170	1,095
18	2,886	1,125
19	1,617	1,129
20	1,725	1,138
21	1,876	1,154
22	1,847	1,173

*W. C. Hartman*

W. C. Hartman

Utilities Operations Department



INTERNAL CORRESPONDENCE

*File: En. B. 15*

UNION CARBIDE NUCLEAR COMPANY

POST OFFICE BOX P. OAK RIDGE, TENNESSEE

To (Name) Dr. H. F. Henry  
Company  
Location K-1001

Date March 23, 1960

Originating Dept. Utilities Operations

Answering letter date

Copy to Mr. A. F. Becher  
File

Subject Beta Activity in the  
Clinch River

Following are results of monitor readings of raw water at K-1515 during the period March 14 through March 22, 1960. The beta activity is reported as disintegrations per minute per 100 milliliters. Also reported is the accumulated 13-week average total beta activity.

13-Week Average

March 14	876	996
15	1,007	1,017
16	1,696	1,064
17	1,174	1,095
18	1,069	1,125
19	599	1,129
20	639	1,138
21	695	1,154
22	684	1,173

*W. C. Hartman*  
W. C. Hartman  
Utilities Operations Department

gl

*note  
file: Env. Sampling.*

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CARBIDE

INTERNAL CORRESPONDENCE

UNION CARBIDE NUCLEAR COMPANY

POST OFFICE BOX P. OAK RIDGE, TENNESSEE

To (Name) Dr. H. F. Henry  
Company  
Location K-1001

Date March 14, 1960  
Originating Dept. Utilities Operations

Answering letter date

Copy to Mr. A. F. Becher  
File

Subject Beta Activity in the  
Clinch River

Following are results of monitor readings of raw water at K-1515 during the period March 1 through March 13, 1960. The beta activity is reported as disintegrations per minute per 100 milliliters. Also reported is the accumulated 13-week average total beta activity.

13-Week Average

March	1	522	688
	2	535	692
	3	5,400	749
	4	5,565	808
	5	3,480	844
	6	2,678	871
	7	2,946	901
	8	2,919	931
	9	2,073	951
	10	1,958	973
	11	2,114	994
	12	2,117	1,015
	13	2,322	1,038

*W. C. Hartman*

W. C. Hartman  
Utilities Operations Department

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CARBIDE

INTERNAL CORRESPONDENCE

*note  
file: Env. Sampling*

UNION CARBIDE NUCLEAR COMPANY •

POST OFFICE BOX P. OAK RIDGE, TENNESSEE

To (Name) Dr. H. F. Henry  
Company  
Location K-1001

Date February 29, 1960

Originating Dept. Utilities Operations

Answering letter date

Copy to Mr. A. F. Becher  
File

Subject Beta Activity in the  
Clinch River

Following are results of monitor readings of raw water at K-1515 during the period of February 24 through February 29, 1960. The beta activity is reported as disintegrations per minute per 100 milliliters. Also reported is the accumulated 13-week average total beta activity.

		<u>13-Week Average</u>
February 24	1,944	663
25	485	667
26	467	671
27	548	677
28	245	680
29	445	683

*W. C. Hartman*  
W. C. Hartman  
Utilities Operations Department

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CARBIDE

INTERNAL CORRESPONDENCE

UNION CARBIDE NUCLEAR COMPANY

POST OFFICE BOX P, OAK RIDGE, TENNESSEE

To (Name) Dr. H. F. Henry  
Company  
Location K-1001

Date February 24, 1960

Originating Dept. Utilities Operations

Answering letter date

Copy to Mr. A. F. Becher  
File

Subject Beta Activity in the  
Clinch River

Following are results of monitor readings of raw water at K-1515 during the period of February 15 through February 23, 1960. The beta activity is reported as disintegrations per minute per 100 milliliters. Also reported is the accumulated 13-week average total beta activity.

13-week average

February 15	752	506
16	755	514
17	537	519
18	2,254	544
19	4,271	590
20	2,014	612
21	1,526	628
22	900	637
23	510	643

W. C. Hartman  
W. C. Hartman  
Utilities Operations Department

*no  
file - env. sys. sig*



INTERNAL CORRESPONDENCE

UNION CARBIDE NUCLEAR COMPANY

POST OFFICE BOX P, OAK RIDGE, TENNESSEE

To (Name) Dr. H. F. Henry  
Company  
Location K-1001

Date February 15, 1960

Originating Dept. Utilities Operations

Answering letter date

Copy to Mr. A. F. Becher  
File

Subject Beta Activity in the  
Clinch River

Following are results of monitor readings of raw water at K-1515 during the two-week period February 1 through February 14, 1960. The beta activity is reported as disintegrations per minute per milliliter. Also reported is the accumulated 13-week average total beta activity for the consecutive days listed.

February	1	411	Average for last 80 days -	355
	2	460	81	356
	3	1,523	82	370
	4	333	83	370
	5	273	84	369
	6	1,831	85	386
	7	3,248	86	419
	8	542	87	420
	9	265	88	419
	10	185	89	416
	11	6,682	90	486
	12	660	91	488
	13	635	91	494
	14	385	91	498

*W. C. Hartman*

W. C. Hartman  
Utilities Operations Department

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CARBIDE

INTERNAL CORRESPONDENCE

*mfr*

UNION CARBIDE NUCLEAR COMPANY • POST OFFICE BOX P. OAK RIDGE, TENNESSEE

To (Name) Dr. H. F. Henry  
Company  
Location K-1001

Date February 2, 1960

Originating Dept. Utilities Operations

Answering letter date

Copy to Mr. A. F. Becher  
File

Subject Beta Activity in the  
Clinch River

Following are results of 24-hour composite samples of raw water at K-1515 during the period January 11 through January 31, 1960.

January 11	348
12	212
13	226
14	222
15	289
16	310
17	168
18	199
19	508
20	174
21	106
22	100
23	93
24	64
25	66
26	53
27	159
28	240
29	856
30	602
31	873

*W. C. Hartman*

W. C. Hartman  
Utilities Operations Department

WCH/gl

*not  
fiter - Env. Sampling  
(Water + Mud)*

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INTERNAL CORRESPONDENCE

JAN 13 1960  
UNION CARBIDE NUCLEAR COMPANY •

POST OFFICE BOX P, OAK RIDGE, TENNESSEE

To (Name) Dr. H. F. Henry  
Company  
Location K-1001

Date January 13, 1960

Originating Dept. Utilities Operations

Answering letter date

Copy to Mr. A. F. Becher  
File

Subject Beta Activity in the  
Clinch River

Following are results of 24-hour composite samples of raw water at K-1515 during the period December 23, 1959, through January 10, 1960.

December	23	166
	24	101
	25	100
	26	<del>77</del>
	27	65
	28	927
	29	392
	30	549
	31	212
January	1	109
	2	<del>116</del>
	3	950
	4	648
	5	822
	6	600 - Estimated from hourly Tracerlab
	7	1,100 - monitor readings
	8	814
	9	<del>476</del>
	10	352

*W. C. Hartman*

W. C. Hartman  
Utilities Operations Department

WCH/gl

-37-